1. What exactly is []?

Ans: it is an empty list.

2. In a list of values stored in a variable called spam, how would you assign the value 'hello' as the third value? (Assume [2, 4, 6, 8, 10] are in spam.)

Ans: spam[2]='hello'

Let's pretend the spam includes the list ['a', 'b', 'c', 'd'] for the next three queries.

3. What is the value of spam[int(int('3' \* 2) / 11)]?

Ans: ‘d’....’3’ \*2 will be ‘33’ that is str 3 multiplied by 2 will give str 33 then int(str) will give int 33 divided by 11 gives 3 then, which is a int spam[3] will give 3rd index value that is 3.

4. What is the value of spam[-1]?

Ans:’d’

5. What is the value of spam[:2]?

Ans:[’a’,’b’] .... will give list of value of 0 and 1 index position excluding 2nd index

Let's pretend bacon has the list [3.14, 'cat,' 11, 'cat,' True] for the next three questions.

6. What is the value of bacon.index('cat')?

Ans: 1

7. How does bacon.append(99) change the look of the list value in bacon?

Ans: [3.14, 'cat', 11, 'cat', True, 99]

8. How does bacon.remove('cat') change the look of the list in bacon?

Ans: [3.14, 11, 'cat', True, 99]...bacon.remove(‘cat’) removes first ‘cat’

9. What are the list concatenation and list replication operators?

Ans: list concatenation operator ‘+’, listreplication operator is ‘\*’.

10. What is difference between the list methods append() and insert()?

Ans: append() items to end of list, insert() adds items to the specified index of list

11. What are the two methods for removing items from a list?

Ans: remove(), pop()

12. Describe how list values and string values are identical.

Ans: in both list and string values can be called by index and both are sequences

13. What's the difference between tuples and lists?

Ans: list is mutable but tuples are not mutable. That is, In the same index position of list we can assign other item or change value but in the same index position we cannot assign items in a tuple.

14. How do you type a tuple value that only contains the integer 42?

Ans: (42,42)

15. How do you get a list value's tuple form? How do you get a tuple value's list form?

Ans: if a=(42,42) then list(a) will give list and tuple(list(a)) will give tuple

16. Variables that "contain" list values are not necessarily lists themselves. Instead, what do they contain?

Ans: variables contains reference to the list value, unlike a string and integer where the variable contains string and integer values that is string and integer themselves.

17. How do you distinguish between copy.copy() and copy.deepcopy()?

Ans: if we consider two list a,b. copy.copy() a is original and b is copy of a, in copy.copy() both are same and dependent that is any change made to list will be visible in both, if in case if we don’t need to carry the changes to b or to a we can use copy.deepcopy().